

REMARKS

Claims 33-38, 41, 43, 46-62, 65, 67, 68, 71-73, and 76-81 are pending after entry of this response. Claims 1-32, 39, 40, 42, 44, 45, 63, 64, 66, 69, 70, 74, and 75 are cancelled.

Many of the claims have been amended to replace the term "means" with the term "apparatus" where appropriate.

The Abstract has been amended to replace the term "means" with the term "apparatus" where appropriate.

§112 Objections and Rejections

The Examiner has objected to the use of legal terminology in the Abstract. The Abstract has been amended to eliminate such use.

The Examiner has noted that the term "means" in many places in the claims are not written so as to invoke 35 USC §112, sixth paragraph. Applicant has amended many of the occurrences of the terms "means" to refer to the structure as "apparatus".

Claim 35 has been rejected under §112 for lacking antecedent basis for the "support members". Claim 34 now refers to "support members" which provides antecedent basis for this term in claim 35.

Claims 59 and 78 were rejected under §112 because the phrase "a standard rail to rail spacing" was deemed to be indefinite. Similarly, claims 60 and 79 were rejected as indefinite for the use of the phrase "a standard spacing". Applicant disagrees with these rejections. It is submitted that contrary to the Examiner's suggestion, the expressions "standard rail to rail spacing" and "a standard spacing" are in fact very specific terms in the rail industry which define very specific dimensions. The width of "standard spacing" and "standard gauge" between each rail is known in the art as 56 1/2 inches (143.5 centimeters). See for example, <http://dictionary.reference.com/browse/standard+gauge> (copy attached as Attachment A.) Thus, when used in the field of the present invention, a person of ordinary skill in the railway arts would readily recognize these terms and would understand the scope of the claims. Accordingly, the phrases referred to above that are found in claims 59, 60, 78 and 79 are proper and definite. Reconsideration of the §112 rejection of these claims is respectfully requested.

§102 Rejections

In paragraphs 4 and 5 of the Action, the Examiner has rejected claims 33-39, 41, 44, 48-53, 56, 58-61, 63-69, 71, 74, and 77-80 as being anticipated by US 4,538,722 (Sumner). As part of the rejection the Examiner stated that in Sumner, "the rail moving means or the rail raising means is operative within the foot prints of the ground engaging wheel means". This is not correct.

In this regard, we draw the Examiner's attention to the fact that claim 33 clearly specifies that "the ground engaging wheel apparatus defines a footprint of the railway rail handling apparatus on the ground to reduce imbalances in the railway rail handling apparatus that may be caused by force exerted in handling a rail, and the rail moving apparatus is, in use, operative within the footprint". Therefore, all parts of the apparatus in the instant invention are contained within the very specifically defined footprint on the ground. The same cannot be said for the machine in Sumner where the rail moving means in Sumner extends and operates outside the footprint of the apparatus defined by the ground engaging wheel means. See for example, Figs. 3 and 4 which show many components of the moving and lifting equipment (such as the "shifting beams 38") well forward of the footprint between the drive tracks 7. For this reason alone, claim 33, and its dependent claims, are not anticipated by Sumner. Claim 34 is also patentable over Sumner for the same reasons as given above for claim 33.

Moreover, the benefits of the invention in contrast to the arrangement in Sumner are discussed in detail in the application, particularly in the paragraph bridging pages 2 and 3 of the application as filed (paragraph [0007] of the US Publication.) Applicant submits that it would not have been obvious to provide the rail moving means operative within the footprint because a complete redesign of the equipment described in Sumner would be required. As such, it is submitted that claims 33 and 34 are also patentable over the device shown in Sumner.

Accordingly, in light of the above, applicant respectfully submits that claims 33-39, 41, 44, 48-53, 56, 58-61, 63-69, 71, 74, and 77-80 are not anticipated by Sumner. Reconsideration and withdrawal of the §102 rejection is respectfully requested.

§103 Rejections

Claims 40, 42-43, 45-46, 70, 72-73 and 75-76 have been rejection under 35 USC §103 as

being unpatentable over Sumner. Without commenting on the individual merits of the claims, it is respectfully submitted that since claim 33 is patentable over Sumner, these dependent claims are also patentable over Sumner. Accordingly, reconsideration and withdrawal of the §103 rejection of these claims is requested.

Claims 33, 34, 39, 41, 47, 54-55 and 57 have been rejected under 35 USC §103 as being unpatentable over US Patent 5,435,252 (Theurer '252) in view of US Patent 6,668,728 (Theurer '728). Claims 62 and 81 were rejected as being unpatentable over the combination of Theurer '252 and Theurer '728, along with US Patent 3,836,120 (Niskin). For the following reasons, applicant respectfully submits that the claims are patentable over Theurer '252 and Theurer '728.

Applicant would like to highlight that the machine disclosed in Theurer '252 has no ground engaging wheels at all. Secondly, the rail moving apparatus described in Theurer '252 is only capable of vertically lifting the rails and sleepers (also known as "ties") away from the ballast bed, to allow treatment of the ballast bed, and then lowering the rail and sleepers back to their initial lateral position on the, now treated, ballast bed; see e.g. col. 1, first paragraph. The rail moving apparatus in Theurer '252 is, therefore, only configured to move the rails with attached sleepers vertically. The rail moving apparatus in Theurer '252 is in no way configured for progressive bending of the rail laterally of an unbent part of the rail to thereby move the rail from a first lateral position to a second lateral position, as required in amended claim 33.

Furthermore, contrary to the Examiner's assertion at the bottom of page 6 of the Action that "The apparatus of Theurer is capable of performing the operations as recited in the instant claims"; Applicant submits that not only does Theurer '252 fail to disclose such a machine, but also the machine that is disclosed could not be capable of such operations. There are at least two important reasons for this as follows:

1 - The machine in Theurer '252 is designed to raise / lower the rails and attached sleepers. The rolling elements 26 of the lifting unit 15 are only able to support the rails 6 by also supporting the sleepers 7 (see Figs. 2 and 3). With the apparatus of Theurer '252 it would not be possible to support the rails on their own without the sleepers attached (the rolling elements 26 would likely slip off the bottom of the rails 6). Since the apparatus will only work when sleepers are moved as well as the rails, it would be physically impossible to transpose a rail from one

lateral position (e.g., next to the sleeper) to another lateral position (e.g., on top of the sleeper) when transposing a rail.

2 - If a person tried to use the equipment described in Theurer '252 in the claimed way it would not work. This is because it is designed to raise and lower the rail, not to transpose it. It therefore does not have the structure required to transpose and laterally bend a rail. The rolling elements 26 are unable to "thread" the rail in the required fashion; the lateral force resulting from the bend in the rail between the first lateral position (next to the sleeper) to the second lateral position (on top of the sleeper) would cause the rail and sleeper to translate across the apparatus uncontrollably, as the machine progresses along the length of the track, until it makes contact with the inner edge of the frame 38 which is not designed for such contact. It is respectfully submitted that the industry would not tolerate such a situation. This is contrary to the present invention which is specifically designed for such "threading" of the rail.

It is submitted that Theurer '728 does not remedy these primary deficiencies in Theurer '252. The Examiner has only cited Theurer '728 as disclosing ground contacting wheels. Theurer '728 does not include any of the other features noted above that are expressly missing from Theurer '252, including the ability to transpose a rail from one lateral position to another lateral position, and transpose and laterally bend a rail as it is "threaded". Likewise Niskin does not teach any of these missing features. Niskin was merely cited as disclosing a block and tackle.

Accordingly, based in the foregoing, it is respectfully submitted that the combination of Theurer '252 and Theurer '728 (with or without Niskin) fails to render obvious claim 33. Therefore, claim 33 and its dependent claims are patentable over the combination of Theurer '252, Theurer '728 and Niskin.

Regarding claim 34, the Examiner will note that the amendments to claim 34 (to include features from the cancelled sub claims) require the supports of the apparatus to be arranged in a square formation with small dimensions. None of the cited documents show supports arranged in any such formation. Clearly, the overall dimensions of the carriage based machines shown in Theurer '252 and Theurer '728 are far greater than the dimensions of the instantly claimed invention.

Spacing the support members by approximately 1 meter in a longitudinal direction and

approximately 1 meter in a transverse direction has the great benefit of significantly improving the stability of the apparatus on the ground because the load carried by the apparatus is distributed between the four corners of the apparatus and any tendency for the apparatus to tip left / right or forward / back is greatly reduced. There is nothing in any of the cited documents to teach, motivate or suggest that providing a smaller machine with supports in the square formation as recited in amended claim 34 would be beneficial. Indeed, the prior art demonstrates a prejudice towards the practice of using very large machines where the supports are spaced by a very large distance along the existing tracks.

It is submitted that a person of ordinary skill in the art of rail installation would be even further discouraged from modifying the arrangements in Theurer '252 and Theurer '728 to create the claimed apparatus due to the inevitable greater dimensions of the resulting modified apparatus. On the contrary, a person of skill in the art would expect that doing this would result in a very large machine indeed, with numerous associated disadvantages (costs, storage and transportation requirements, maintenance, maneuverability, etc.). However, the Applicant has worked against the prejudice suggested in the prior art and he has realized that the advantages provided by the greatly improved stability of the machine is sufficient reward. Surprisingly, the greatly improved stability of the present invention over the machines described in the prior art also, in fact, enables the machine to be much smaller which has a number of repercussive benefits (lower cost, simpler maintenance, easier storage and transportation etc.).

As such, based on the foregoing, it is respectfully submitted that claim 34 and its dependent claims are all patentable over the combination of Theurer '252 and Theurer '728 (with or without Niskin).

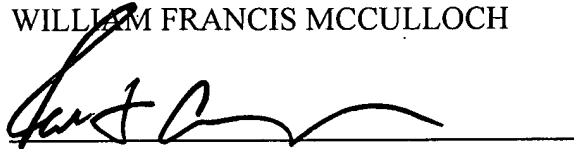
Conclusion

Based on the foregoing, Applicant respectfully submits that the pending claims in the application are all patentable over the prior art of record. Reconsideration and withdrawal of the rejections of the claims is respectfully requested.

If the Examiner believes that direct communication with the Applicant's attorney would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

WILLIAM FRANCIS MCCULLOCH

A handwritten signature in black ink, appearing to read 'Robert E. Cannuscio', is written over a horizontal line.

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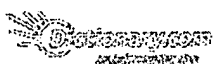
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standard gauge

-noun

See under *gauge* (def. 13).

Also, especially in technical use, **standard gage**.

Origin:

1870-75

-Related forms

standard-gauge, standard-gauged, *adjective*

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-verb (used with object)

1. to determine the exact dimensions, capacity, quantity, or force of; measure.
2. to appraise, estimate, or judge.
3. to make conformable to a standard.
4. to mark or measure off; delineate.
5. to prepare or mix (plaster) with a definite proportion of plaster of Paris and mortar.
6. to chip or rub (bricks or stones) to a uniform size or shape.

-noun

7. a standard of measure or measurement.
8. a standard dimension, size, or quantity.
9. any device or instrument for measuring, registering measurements, or testing something, esp. for measuring a dimension, quantity, or mechanical accuracy: *pressure gauge*; *marking gauge*.
10. a means of estimating or judging; criterion; test.
11. extent; scope; capacity: *trying to determine the gauge of his own strength*.
12. *Ordinance*. a unit of measure of the internal diameter of a shotgun barrel, determined by the number of spherical lead bullets of a diameter equal to that of the bore that are required to make one pound: a *twelve-gauge shotgun*.
13. *Railroads*. the distance between the inner edges of the heads of the rails in a track, usually 4 ft. 8.5 in. (1.4 m) (**standard gauge**), but sometimes more (**broad gauge**) and sometimes less (**narrow gauge**).
14. the distance between a pair of wheels on an axle.
15. the thickness or diameter of various, usually thin, objects, as the thickness of sheet metal or the diameter of a wire or screw.
16. the fineness of a knitted fabric as expressed in loops per every



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1.5 in. (3.8 cm): 15 denier, 60 gauge stockings.

17. *Nautical.* the position of one vessel as being to the windward (**weather gauge**) or to the leeward (**lee gauge**) of another vessel on an approximately parallel course.

18. *Building Trades.* the portion of the length of a slate, tile, etc.,

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19. the amount of plaster of Paris mixed with mortar or common plaster to hasten the set.

Also, especially in technical use, **gagg**.

Origin:

1375-1425; late ME < ONF (F *jauge*) < Gmc

—Related forms

gauge-a-ble, *adjective*

gauge-a-bly, *adverb*

mis-gauge, *verb (used with object)*, -gauged, -gaug-ing.

mul-ti-gauge, *adjective*

re-gauge, *verb (used with object)*, -gauged, -gaug-ing.

self-gauging, *adjective*

un-gauged, *adjective*

—Synonyms

2. evaluate, assess, value, calculate.

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Word Origin & History

gauge

mid-15c., from Anglo-Fr. *gauge* (mid-14c.), from O.N.Fr. *gauger*, from *gauge* "gauging rod," perhaps from Frank. **galgo* "rod, pole for measuring" (cf. O.N. *gelgja* "pole, perch," O.H.G. *galgo*, English *gallows*). Related: *Gauged*; *gauging*.

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standard gauge

n.

1. A railroad track having a width of 56 1/2 inches (143.5 centimeters).
2. A railroad or railroad car built to standard gauge specification.

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Medical Dictionary

²gauge definition

also **gag** Function: vt

gauged Inflected Form: also **gaged**

„ **gaug-ing** Inflected Form: also **gag-ing**

1 a : to measure exactly

b : to determine the capacity or contents of

2 a : to check for conformity to specifications or limits

b : to measure off or set out

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